

## WEST Search History





DATE: Thursday, April 14, 2005

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L23	6828135	1
<input type="checkbox"/>	L22	6861242	1
<input type="checkbox"/>	L21	6642038	1
		<i>DB=PGPB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L15	20030148460	1
<input type="checkbox"/>	L14	20020025550	1
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L13	6770468	1
<input type="checkbox"/>	L12	6670165	1
<input type="checkbox"/>	L11	6537785	1
<input type="checkbox"/>	L10	6534300	3
<input type="checkbox"/>	L9	L8.pn.	1
<input type="checkbox"/>	L8	5733761	62
<input type="checkbox"/>	L7	L4 and kifunensine	0
<input type="checkbox"/>	L6	L4 and inhibitor	7
<input type="checkbox"/>	L5	L4 and mannosidase	0
<input type="checkbox"/>	L4	L3 and glucocerebrosidase	13
<input type="checkbox"/>	L3	L1 and gene activat\$3	126
<input type="checkbox"/>	L2	L1.PN.	1
<input type="checkbox"/>	L1	5641670	242

END OF SEARCH HISTORY

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NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks  
(ROSPATENT) added to list of core patent offices covered  
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status  
data from INPADOC  
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available  
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded  
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN  
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced  
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded  
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced  
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY  
NEWS 12 MAR 22 PATDPASPC - New patent database available  
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags  
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new  
fields  
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced  
  
NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005  
  
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=> fil .eliz

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FULL ESTIMATED COST	0.21	0.21

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=> s glucocerebrosidase (10a) kifunensine  
L1 4 GLUCOCEREBROSIDASE (10A) KIFUNENSINE

=> dup rem l1  
PROCESSING COMPLETED FOR L1  
L2 3 DUP REM L1 (1 DUPLICATE REMOVED)

=> d 1-3

L2 ANSWER 1 OF 3 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
DUPLICATE 1  
AN 2003-21941 BIOTECHDS  
TI Preparing a highly phosphorylated acid beta-glucocerebrosidase for  
treating Gaucher's disease comprises contacting an acid  
beta-glucocerebrosidase with N-acetylglucosaminyl (GlcNAc)  
phosphotransferase and phosphodiester alpha-GlcNAcase;  
involving vector-mediated gene transfer and expression in host cell  
for use in gene therapy  
AU CANFIELD W M  
PA GENZYME GLYCOBIOLOGY RES INST INC  
PI WO 2003056897 17 Jul 2003  
AI WO 2002-US37623 20 Dec 2002  
PRAI US 2001-24197 21 Dec 2001; US 2001-24197 21 Dec 2001  
DT Patent  
LA English  
OS WPI: 2003-587057 [55]

L2 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2003:550993 HCAPLUS  
DN 139:112730  
TI Method for production of highly phosphorylated human acid  
.beta.-glucocerebrosidase (GBA), and use of GBA in treating bone or lung  
tissue of patient with Gaucher's disease  
IN Canfield, William  
PA Novazyme Pharmaceuticals, Inc., USA  
SO U.S. Pat. Appl. Publ., 54 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2003133924 A1 20030717 US 2001-24197 20011221  
 WO 2003056897 A3 20041209 WO 2002-US37623 20021220  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 PRAI US 2001-24197 A 20011221

L2 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:157596 HCAPLUS

DN 136:199031

TI High mannose proteins and methods of making high mannose proteins

IN Kinoshita, Carol A.; Prashant, Mishra; Borowski, Marianne;  
 Francis-Daniel, Peter

PA Transkaryotic Therapies, Inc., USA

SO PCT Int. Appl., 74 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002015927	A1	20020228	WO 2001-US25882	20010817
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2388041	AA	20020228	CA 2001-2388041	20010817
AU 2001085061	A5	20020304	AU 2001-85061	20010817
EP 1309340	A1	20030514	EP 2001-964176	20010817
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004506438	T2	20040304	JP 2002-520848	20010817
PRAI US 2000-641471	A1	20000818		
WO 2001-US25882	W	20010817		

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	21.16	21.37

=> s glucocerebrosidase and kifunensine  
 L3 7 GLUCOCEREBROSIDASE AND KIFUNENSINE

=> dup rem l3  
 PROCESSING COMPLETED FOR L3  
 L4 4 DUP REM L3 (3 DUPLICATES REMOVED)

=> s l4 not l2  
 L5 2 L4 NOT L2

=> d 1,2

L5 ANSWER 1 OF 2 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
 AN 2002-12737 BIOTECHDS  
 TI Producing a high mannose \*\*\*glucocerebrosidase\*\*\* (GCB) useful for  
 treating Gaucher's Disease comprises preventing removal of at least one  
 mannose residue distal to the pentasaccharide core of the precursor  
 oligosaccharide of GCB;  
 vector-mediated transfer, expression in host cell, antisense  
 oligonucleotide and mannosidase gene knockout for recombinant protein  
 production and gene therapy  
 AU KINOSHITA C A; PRASHSANT M; BOROWSKI M; FRANCIS-DANIEL P  
 PA TRANSKARYOTIC THERAPIES INC  
 PI WO 2002015927 28 Feb 2002  
 AI WO 2000-US25882 18 Aug 2000  
 PRAI US 2000-641471 18 Aug 2000  
 DT Patent  
 LA English  
 OS WPI: 2002-315449 [35]

L5 ANSWER 2 OF 2 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 AN 2001-290356 [30] WPIDS  
 DNC C2001-088895  
 TI Novel N-acetylglucosamine-1-phosphotransferase and N-acetylglucosamine-1-  
 phosphodiester alpha-N-Acetylglucosaminidase, useful for producing  
 phosphorylated lysosomal hydrolase for treating lysosomal storage  
 diseases.  
 DC B04 D16  
 IN CANFIELD, W M  
 PA (CANF-I) CANFIELD W M; (NOVA-N) NOVAZYME PHARM INC; (GENZ-N) GENZYME  
 GLYCOBIOLOGY RES INST INC  
 CYC 95  
 PI WO 2001019955 A2 20010322 (200130)\* EN 91 C12N000-00  
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TZ UG ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM  
 DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
 LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE  
 SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
 AU 2000073303 A 20010417 (200140) C12N000-00  
 US 2002025550 A1 20020228 (200220) C12P021-06

EP 1224266 A2 20020724 (200256) EN C12N009-12  
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

BR 2000014514 A 20020723 (200257) C12N009-12  
US 2002150981 A1 20021017 (200270) C12P021-06  
JP 2003509043 W 20030311 (200319) 94 C12N015-09  
US 6534300 B1 20030318 (200322) C12N009-14  
US 6537785 B1 20030325 (200325) A61K038-47  
US 2003148460 A1 20030807 (200358) C12P021-02  
US 6642038 B1 20031104 (200374) C12N009-14  
US 6670165 B2 20031230 (200402) C12N009-14  
US 6770468 B1 20040803 (200451) C12N009-16  
MX 2002002901 A1 20031201 (200470) A61K038-44  
US 6828135 B2 20041207 (200480) C12N009-16  
US 6861242 B2 20050301 (200516) C12N009-14

ADT WO 2001019955 A2 WO 2000-US21970 20000914; AU 2000073303 A AU 2000-73303  
20000914; US 2002025550 A1 Provisional US 1999-153831P 19990914, Cont of  
US 2000-635872 20000810, US 2001-895072 20010702; EP 1224266 A2 EP  
2000-961335 20000914, WO 2000-US21970 20000914; BR 2000014514 A BR  
2000-14514 20000914, WO 2000-US21970 20000914; US 2002150981 A1  
Provisional US 1999-153831P 19990914, Div ex US 2000-635872 20000810, US  
2001-986552 20011109; JP 2003509043 W WO 2000-US21970 20000914, JP  
2001-523727 20000914; US 6534300 B1 Provisional US 1999-153831P 19990914,  
US 2000-635872 20000810; US 6537785 B1 Provisional US 1999-153831P  
19990914, US 2000-636077 20000810; US 2003148460 A1 Provisional US  
1999-153831P 19990914, Div ex US 2000-636596 20000810, US 2002-306686  
20021129; US 6642038 B1 Provisional US 1999-153831P 19990914, US  
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Div ex US 2000-635872 20000810, US 2001-986552 20011109; US 6770468 B1  
Provisional US 1999-153831P 19990914, US 2000-636596 20000810; MX  
2002002901 A1 WO 2000-US21970 20000914, MX 2002-2901 20020314; US 6828135  
B2 Provisional US 1999-153831P 19990914, Div ex US 2000-636596 20000810,  
US 2002-306686 20021129; US 6861242 B2 Provisional US 1999-153831P  
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FDT AU 2000073303 A Based on WO 2001019955; EP 1224266 A2 Based on WO  
2001019955; BR 2000014514 A Based on WO 2001019955; JP 2003509043 W Based  
on WO 2001019955; US 6670165 B2 Div ex US 6534300; MX 2002002901 A1 Based  
on WO 2001019955; US 6861242 B2 Cont of US 6534300

PRAI US 1999-153831P 19990914; US 2000-635872 20000810;  
US 2001-895072 20010702; US 2001-986552 20011109;  
US 2000-636077 20000810; US 2000-636596 20000810;  
US 2002-306686 20021129; US 2000-636060 20000810

IC ICM A61K038-44; A61K038-47; C12N000-00; C12N009-12; C12N009-14;  
C12N009-16; C12N015-09; C12P021-02; C12P021-06  
ICS A61K038-46; A61K038-51; A61P043-00; C07H021-04; C07K014-00;  
C07K016-40; C12N001-15; C12N001-19; C12N001-20; C12N001-21;  
C12N005-06; C12N005-10; C12N009-10; C12N009-24; C12N009-26;  
C12N009-36; C12N015-00; C12N015-63

=> d 2 ab

L5 ANSWER 2 OF 2 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AB WO 200119955 A UPAB: 20010603

NOVELTY - Isolated human N-acetylglucosamine-1-phosphotransferase  
(GlcNAc-phosphotranferase) (I) and phosphodiester alpha -GlcNAcase  
(N-acetylglucosamine-1-phosphodiester alpha -N-Acetylglucosaminidase)  
(II), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the  
following:

- (1) isolated nucleic acids (III) and (IV), encoding (I) and (II),  
respectively;
- (2) isolated nucleic acids which hybridize under stringent conditions  
to (III) or (IV);
- (3) vector (V) comprising (III) or (IV);
- (4) host cell (VI) comprising (V);
- (5) preparation of (I) or (II);
- (6) isolated nucleic acids (VII) and (VIII) encoding the murine  
GlcNAc-phosphotransferase which has a fully defined alpha -subunit  
sequence of (S15), a beta -subunit sequence of (S18), and gamma -subunit  
sequence of (S9); and murine phosphodiester alpha -GlcNAcase comprising a

sequence (S19), respectively (sequencing listing not provided in the specification);

(7) nucleic acids which hybridize under stringent conditions to (VII) or (VIII);

(8) a vector comprising (VII) or (VIII);

(9) a cell comprising (VII) or (VIII);

(10) preparation of murine GlcNAc-phosphotransferase and phosphodiester alpha -GlcNAcase;

(11) purified lysosomal hydrolase comprising a mannose 6-phosphate;

(12) phosphorylated lysosomal hydrolase obtained by (M1);

(13) producing a high mannose lysosomal hydrolase (M2) involves culturing transformed cells comprising a recombinant polynucleotide which encodes for a recombinant hydrolase in the presence of an alpha 1,2-mannosidase inhibitor, and recovering high mannose recombinant hydrolases from the culture;

(14) a high mannose lysosomal hydrolase produced by the above method;

(15) antibodies (IX) and (X) which bind (I) and (II), produced by PT18 hybridoma deposited at ATCC under accession No. PTA 2432; or produced by UC1 hybridoma deposited at ATCC under accession No. 2431, respectively;

(16) producing (I) or (II) in a cell involves transfecting into the cell a DNA construct comprising a targeting sequence homologous to a target site within or upstream of a endogenous GlcNAc-phosphotransferase gene (which comprises a sequence of 5597 base pairs (S4) or (S5)), or phosphodiester alpha -GlcNAcase contained in the cell, an exogenous regulatory sequence, an exon, and an unpaired splice-donor site at the 3' end of the exon. Transfecting generates a homologously recombinant cell in which the splice-donor site is operatively linked to the second exon of the endogenous gene, and the exogenous regulatory sequence controls transcription of the construct driven, the endogenous gene, and any sequence lysing between the construct-driven exon and the endogenous gene, to produce a RNA transcript that encodes (I) or (II), so that the homologously recombinant cell produces (I) or (II) (sequencing listing not provided in the specification);

(17) isolated amino acid sequences comprising (S1) ( alpha -subunit of (I)), (S2) ( beta -subunit of (I)), (S3) ( gamma -subunit of (I));

(18) isolated nucleic acids (XI) encoding the alpha , beta , gamma subunits of (I);

(19) an isolated nucleic acid which hybridizes to (XI);

(20) a vector comprising (XI); and

(21) a host cell comprising (XI).

ACTIVITY - Nephrotropic. No supporting data is given.

MECHANISM OF ACTION - Enzyme replacement therapy.

USE - (I), (II) is useful for preparing (M1) a phosphorylated lysosomal hydrolase ( alpha -glucosidase, alpha -iduronidase, alpha -galactosidase A, arylsulfatase, N-acetylgalactosamine-6-sulfatase, beta -galactosidase, iduronate 2-sulfatase, ceramidase, galactocerebrosidase, B-glucuronidase, Heparan N-sulfatase, N-acetyl- alpha -glucosaminidase, Acetyl CoA- alpha -glucosaminide N-acetyl transferase, N-acetyl-glucosamine-6 sulfatase, Galactose 6-sulfatase, Arylsulfatase A, Arylsulfatase B, Arylsulfatase C, Arylsulfatase A Cerebroside, Ganglioside, Acid beta -galactosidase GM1 Galglioside, Acid beta -galactosidase, Hexosaminidase A, Hexosaminidase B, alpha -fucosidase, alpha -N-Acetyl galactosaminidase, Glycoprotein Neuraminidase, Aspartylglucosamine amidase, Acid Lipase, Acid Ceramidase, Lysosomal Sphingomyelinase, Sphingomyelinase, and \*\*\*Glucocerebrosidase\*\*\* beta -Glucosidase) which involves contacting the lysosomal hydrolase with (I) to produce a modified lysosomal hydrolase which is contacted with an isolated phosphodiester alpha -GlcNAcase. The phosphorylated hydrolase comprising a terminal mannose-6-phosphate, produced by the above mentioned method is useful for treating a patient suffering from a lysosomal storage disease such as pompe disease, Hurler syndrome, Fabry disease, Maroteaux-Lamy syndrome, Morquio syndrome, Hunter syndrome, Farber disease, Krabbe disease, Sly syndrome, Sanfilippo A, Sanfilippo B, Sanfilippo D, Multiple Sulfatase Deficiency, Metachromatic Leukodystrophy, Mucopolysaccharidosis IV, GM1 gangliosidosis, galactosialidosis, Tay-Sachs, Sandhof, Fucosidosis, Schindler disease, sialidosis, Aspartylglucosaminuria, Wolman disease, Farber lipogranulomatosis, Nieman-Pick, and Gaucher disease. (IX) and (X) are useful for isolating (I) and (II), respectively which involves contacting a cellular lysate containing (I) or (II) with (IX) or (X), to form a complex and then isolating the (I)-(IX), or (II)-(X) complex (claimed).

=> d glucocerebrosidase and mannose  
 'GLUCOCEREBROSIDASE' IS NOT A VALID FORMAT  
 'AND' IS NOT A VALID FORMAT  
 'MANNOSE' IS NOT A VALID FORMAT

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 'S' IS NOT A VALID FORMAT  
 'GLUCOCEREBROSIDASE' IS NOT A VALID FORMAT  
 'AND' IS NOT A VALID FORMAT  
 'MANNOSE' IS NOT A VALID FORMAT

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 AN 2002-12737 BIOTECHDS  
 TI Producing a high mannose \*\*\*glucocerebrosidase\*\*\* (GCB) useful for treating Gaucher's Disease comprises preventing removal of at least one mannose residue distal to the pentasaccharide core of the precursor oligosaccharide of GCB;  
     vector-mediated transfer, expression in host cell, antisense oligonucleotide and mannosidase gene knockout for recombinant protein production and gene therapy  
 AU KINOSHITA C A; PRASHSANT M; BOROWSKI M; FRANCIS-DANIEL P  
 PA TRANSKARYOTIC THERAPIES INC  
 PI WO 2002015927 28 Feb 2002  
 AI WO 2000-US25882 18 Aug 2000  
 PRAI US 2000-641471 18 Aug 2000  
 DT Patent  
 LA English  
 OS WPI: 2002-315449 [35]

=> s glucocerebrosidase and mannose  
 L6 320 GLUCOCEREBROSIDASE AND MANNOSE

=> s glucocerebrosidase (5a) mannose  
 L7 161 GLUCOCEREBROSIDASE (5A) MANNOSE

=> s glucocerebrosidase (5a) mannose (5a)mannosidase  
 L8 3 GLUCOCEREBROSIDASE (5A) MANNOSE (5A) MANNOSIDASE

=> dup rem l8  
 PROCESSING COMPLETED FOR L8  
 L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> d 1,2

L9 ANSWER 1 OF 2 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
 DUPLICATE 1  
 AN 2003-21941 BIOTECHDS  
 TI Preparing a highly phosphorylated acid beta-glucocerebrosidase for treating Gaucher's disease comprises contacting an acid beta-glucocerebrosidase with N-acetylglucosaminyl (GlcNAc) phosphotransferase and phosphodiester alpha-GlcNAcase;  
     involving vector-mediated gene transfer and expression in host cell for use in gene therapy  
 AU CANFIELD W M  
 PA GENZYME GLYCOBIOLOGY RES INST INC  
 PI WO 2003056897 17 Jul 2003  
 AI WO 2002-US37623 20 Dec 2002  
 PRAI US 2001-24197 21 Dec 2001; US 2001-24197 21 Dec 2001  
 DT Patent



LA English  
OS WPI: 2003-587057 [55]

L9 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2002:157596 HCAPLUS  
DN 136:199031  
TI High mannose proteins and methods of making high mannose proteins  
IN Kinoshita, Carol A.; Prashant, Mishra; Borowski, Marianne;  
Francis-Daniel, Peter  
PA Transkaryotic Therapies, Inc., USA  
SO PCT Int. Appl., 74 pp.  
CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002015927	A1	20020228	WO 2001-US25882	20010817
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2388041	AA	20020228	CA 2001-2388041	20010817
	AU 2001085061	A5	20020304	AU 2001-85061	20010817
	EP 1309340	A1	20030514	EP 2001-964176	20010817
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004506438	T2	20040304	JP 2002-520848	20010817
PRAI	US 2000-641471	A1	20000818		
	WO 2001-US25882	W	20010817		

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 1 kwic

L9 ANSWER 1 OF 2 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
AB. . . transfected cells comprising a recombinant polynucleotide which encodes a recombinant acid beta-glucocerebrosidase in the presence of at least one alpha 1,2- \*\*\*mannosidase\*\*\* inhibitor; recovering a high \*\*\*mannose\*\*\* recombinant acid beta- \*\*\*glucocerebrosidase\*\*\* from the transfected cell; contacting the high mannose recombinant acid beta-glucocerebrosidase with an isolated GlcNAc phosphotransferase to produce a modified.

=> dis his

(FILE 'HOME' ENTERED AT 20:13:39 ON 14 APR 2005)

FILE 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS, ESBIODBASE, BIOTECHNO, WPIDS' ENTERED AT 20:13:49 ON 14 APR 2005

L1 4 S GLUCOCEREBROSIDASE (10A) KIFUNENSINE  
L2 3 DUP REM L1 (1 DUPLICATE REMOVED)  
L3 7 S GLUCOCEREBROSIDASE AND KIFUNENSINE  
L4 4 DUP REM L3 (3 DUPLICATES REMOVED)  
L5 2 S L4 NOT L2  
L6 320 S GLUCOCEREBROSIDASE AND MANNOSE  
L7 161 S GLUCOCEREBROSIDASE (5A) MANNOSE  
L8 3 S GLUCOCEREBROSIDASE (5A) MANNOSE (5A) MANNOSIDASE  
L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> s kifunensine (5a) deoxymannojirimycin  
L10 111 KIFUNENSINE (5A) DEOXYMANNOJIRIMYCIN

=> s 110 and glucocerebrosidase

L11 4 L10 AND GLUCOCEREBROSIDASE

=> dup rem l11

PROCESSING COMPLETED FOR L11

L12 3 DUP REM L11 (1 DUPLICATE REMOVED)

=> d 1-3

L12 ANSWER 1 OF 3 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
DUPLICATE 1

AN 2003-21941 BIOTECHDS

TI Preparing a highly phosphorylated acid beta- \*\*\*glucocerebrosidase\*\*\*  
for treating Gaucher's disease comprises contacting an acid beta-  
\*\*\*glucocerebrosidase\*\*\* with N-acetylglucosaminyl (GlcNAc)  
phosphotransferase and phosphodiester alpha-GlcNAcase;  
involving vector-mediated gene transfer and expression in host cell  
for use in gene therapy

AU CANFIELD W M

PA GENZYME GLYCOBIOLOGY RES INST INC

PI WO 2003056897 17 Jul 2003

AI WO 2002-US37623 20 Dec 2002

PRAI US 2001-24197 21 Dec 2001; US 2001-24197 21 Dec 2001

DT Patent

LA English

OS WPI: 2003-587057 [55]

L12 ANSWER 2 OF 3 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2002-315449 [35] WPIDS

DNC C2002-091820

TI Producing a high mannose \*\*\*glucocerebrosidase\*\*\* (GCB) useful for  
treating Gaucher's Disease comprises preventing removal of at least one  
mannose residue distal to the pentasaccharide core of the precursor  
oligosaccharide of GCB.

DC B04 D16

IN BOROWSKI, M; FRANCIS-DANIEL, P; KINOSHITA, C A; PRASHSANT, M; KINOSHITA, C  
M

PA (TRAN-N) TRANSKARYOTIC THERAPIES INC

CYC 97

PI WO 2002015927 A1 20020228 (200235)\* EN 74 A61K038-47

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU  
SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001085061 A 20020304 (200247) A61K038-47

CN 1392797 A 20030122 (200332) A61K038-47

EP 1309340 A1 20030514 (200333) EN A61K038-47

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI TR

JP 2004506438 W 20040304 (200417) 124 C12N009-24

MX 2002003894 A1 20030701 (200420) A61K038-47

ADT WO 2002015927 A1 WO 2001-US25882 20010817; AU 2001085061 A AU 2001-85061  
20010817; CN 1392797 A CN 2001-802801 20010817; EP 1309340 A1 EP  
2001-964176 20010817, WO 2001-US25882 20010817; JP 2004506438 W WO  
2001-US25882 20010817, JP 2002-520848 20010817; MX 2002003894 A1 WO  
2001-US25882 20010817, MX 2002-3894 20020418

FDT AU 2001085061 A Based on WO 2002015927; EP 1309340 A1 Based on WO  
2002015927; JP 2004506438 W Based on WO 2002015927; MX 2002003894 A1 Based  
on WO 2002015927

PRAI US 2000-641471 20000818

IC ICM A61K038-47; C12N009-24

ICS A61K038-43; A61P003-06; C07D211-46; C12N005-10; C12N009-42;  
C12N009-99; C12N015-09; C12N015-56; C12N015-85

L12 ANSWER 3 OF 3 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-290356 [30] WPIDS

DNC C2001-088895

TI Novel N-acetylglucosamine-1-phosphotransferase and N-acetylglucosamine-1-  
phosphodiester alpha-N-Acetylglucosaminidase, useful for producing  
phosphorylated lysosomal hydrolase for treating lysosomal storage

diseases.

DC B04 D16

IN CANFIELD, W M

PA (CANF-I) CANFIELD W M; (NOVA-N) NOVAZYME PHARM INC; (GENZ-N) GENZYME  
GLYCOBIOLOGY RES INST INC

CYC 95

PI WO 2001019955 A2 20010322 (200130)\* EN 91 C12N000-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
NL OA PT SD SE SL SZ TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM  
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE  
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000073303 A 20010417 (200140) C12N000-00

US 2002025550 A1 20020228 (200220) C12P021-06

EP 1224266 A2 20020724 (200256) EN C12N009-12

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

BR 2000014514 A 20020723 (200257) C12N009-12

US 2002150981 A1 20021017 (200270) C12P021-06

JP 2003509043 W 20030311 (200319) 94 C12N015-09

US 6534300 B1 20030318 (200322) C12N009-14

US 6537785 B1 20030325 (200325) A61K038-47

US 2003148460 A1 20030807 (200358) C12P021-02

US 6642038 B1 20031104 (200374) C12N009-14

US 6670165 B2 20031230 (200402) C12N009-14

US 6770468 B1 20040803 (200451) C12N009-16

MX 2002002901 A1 20031201 (200470) A61K038-44

US 6828135 B2 20041207 (200480) C12N009-16

US 6861242 B2 20050301 (200516) C12N009-14

ADT WO 2001019955 A2 WO 2000-US21970 20000914; AU 2000073303 A AU 2000-73303  
20000914; US 2002025550 A1 Provisional US 1999-153831P 19990914, Cont of  
US 2000-635872 20000810, US 2001-895072 20010702; EP 1224266 A2 EP  
2000-961335 20000914, WO 2000-US21970 20000914; BR 2000014514 A BR  
2000-14514 20000914, WO 2000-US21970 20000914; US 2002150981 A1  
Provisional US 1999-153831P 19990914, Div ex US 2000-635872 20000810, US  
2001-986552 20011109; JP 2003509043 W WO 2000-US21970 20000914, JP  
2001-523727 20000914; US 6534300 B1 Provisional US 1999-153831P 19990914,  
US 2000-635872 20000810; US 6537785 B1 Provisional US 1999-153831P  
19990914, US 2000-636077 20000810; US 2003148460 A1 Provisional US  
1999-153831P 19990914, Div ex US 2000-636596 20000810, US 2002-306686  
20021129; US 6642038 B1 Provisional US 1999-153831P 19990914, US  
2000-636060 20000810; US 6670165 B2 Provisional US 1999-153831P 19990914,  
Div ex US 2000-635872 20000810, US 2001-986552 20011109; US 6770468 B1  
Provisional US 1999-153831P 19990914, US 2000-636596 20000810; MX  
2002002901 A1 WO 2000-US21970 20000914, MX 2002-2901 20020314; US 6828135  
B2 Provisional US 1999-153831P 19990914, Div ex US 2000-636596 20000810,  
US 2002-306686 20021129; US 6861242 B2 Provisional US 1999-153831P  
19990914, Cont of US 2000-635872 20000810, US 2001-895072 20010702

FDT AU 2000073303 A Based on WO 2001019955; EP 1224266 A2 Based on WO  
2001019955; BR 2000014514 A Based on WO 2001019955; JP 2003509043 W Based  
on WO 2001019955; US 6670165 B2 Div ex US 6534300; MX 2002002901 A1 Based  
on WO 2001019955; US 6861242 B2 Cont of US 6534300

PRAI US 1999-153831P 19990914; US 2000-635872 20000810;  
US 2001-895072 20010702; US 2001-986552 20011109;  
US 2000-636077 20000810; US 2000-636596 20000810;  
US 2002-306686 20021129; US 2000-636060 20000810

IC ICM A61K038-44; A61K038-47; C12N000-00; C12N009-12; C12N009-14;  
C12N009-16; C12N015-09; C12P021-02; C12P021-06

ICS A61K038-46; A61K038-51; A61P043-00; C07H021-04; C07K014-00;  
C07K016-40; C12N001-15; C12N001-19; C12N001-20; C12N001-21;  
C12N005-06; C12N005-10; C12N009-10; C12N009-24; C12N009-26;  
C12N009-36; C12N015-00; C12N015-63

=> d 3 kwic

L12 ANSWER 3 OF 3 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

AB

A, Hexosaminidase B, alpha -fucosidase, alpha -N-Acetyl galactosaminidase,  
Glycoprotein Neuraminidase, Aspartylglucosamine amidase, Acid Lipase, Acid

Ceramidase, Lysosomal Sphingomyelinase, Sphingomyelinase, and  
\*\*\*Glucocerebrosidase\*\*\* beta -Glucosidase) which involves contacting  
the lysosomal hydrolase with (I) to produce a modified lysosomal hydrolase  
which is contacted with.

TECH.

alpha-GlcNAcase, is prepared by standard recombinant techniques. In (M2),  
preferably a high mannose alpha-glucosidase is produced. The  
alpha-1,2-mannosidase inhibitor is \*\*\*deoxymannojirimycin\*\*\* (dMM),  
preferably, \*\*\*kifunensine\*\*\*, D-Mannonolactam amidrazone, and  
N-butyl-deoxymannojirimycin. Sequence listing not provided in the  
specification. The method preferably involves contacting a recombinant  
lysosomal hydrolase.

=> s l10 and mannos?

L13 111 L10 AND MANNOS?

=> s l10 and carbohydrate core

L14 0 L10 AND CARBOHYDRATE CORE

=> s l10 and carbohydrate

L15 43 L10 AND CARBOHYDRATE

=> dup rem l15

PROCESSING COMPLETED FOR L15

L16 13 DUP REM L15 (30 DUPLICATES REMOVED)

=> d 1-10

L16 ANSWER 1 OF 13 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
DUPLICATE 1

AN 2004-00315 BIOTECHDS

TI Producing a glycoprotein with reduced complex \*\*\*carbohydrates\*\*\* by  
culturing the lectin resistant mammalian cell expressing the glycoprotein  
for treating lysosomal storage disease;  
recombinant protein production via host cell culture for use in  
disease therapy and gene therapy

AU CANFIELD W M

PA NOVAZYME PHARM INC

PI US 2003124653 3 Jul 2003

AI US 2001-23890 21 Dec 2001

PRAI US 2001-23890 21 Dec 2001; US 2001-23890 21 Dec 2001

DT Patent

LA English

OS WPI: 2003-810985 [76]

L16 ANSWER 2 OF 13 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
DUPLICATE 2

AN 2004-00314 BIOTECHDS

TI Producing a high mannose glycoprotein for treating lysosomal storage  
disease, comprises culturing the lectin resistant mammalian cell in the  
presence of \*\*\*deoxymannojirimycin\*\*\* and \*\*\*kifunensine\*\*\*;  
protein production via host cell culture for use in disease therapy  
and gene therapy

AU CANFIELD W M

PA NOVAZYME PHARM INC

PI US 2003124652 3 Jul 2003

AI US 2001-23889 21 Dec 2001

PRAI US 2001-23889 21 Dec 2001; US 2001-23889 21 Dec 2001

DT Patent

LA English

OS WPI: 2003-810984 [76]

L16 ANSWER 3 OF 13 MEDLINE on STN DUPLICATE 3

AN 2003556750 MEDLINE

DN PubMed ID: 14636047

TI Comparison of \*\*\*kifunensine\*\*\* and 1- \*\*\*deoxymannojirimycin\*\*\*  
binding to class I and II alpha-mannosidases demonstrates different  
saccharide distortions in inverting and retaining catalytic mechanisms.

AU Shah Niket; Kuntz Douglas A; Rose David R

CS Department of Medical Biophysics, University of Toronto, Ontario, Canada.

SO Biochemistry, (2003 Dec 2) 42 (47) 13812-6.  
 Journal code: 0370623. ISSN: 0006-2960.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 OS PDB-1PS3  
 EM 200403  
 ED Entered STN: 20031126  
 Last Updated on STN: 20040323  
 Entered Medline: 20040322

L16 ANSWER 4 OF 13 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 AN 2002-315449 [35] WPIDS  
 DNC C2002-091820  
 TI Producing a high mannose glucocerebrosidase (GCB) useful for treating  
 Gaucher's Disease comprises preventing removal of at least one mannose  
 residue distal to the pentasaccharide core of the precursor  
 oligosaccharide of GCB.  
 DC B04 D16  
 IN BOROWSKI, M; FRANCIS-DANIEL, P; KINOSHITA, C A; PRASHSANT, M; KINOSHITA, C  
 M  
 PA (TRAN-N) TRANSKARYOTIC THERAPIES INC  
 CYC 97  
 PI WO 2002015927 A1 20020228 (200235)\* EN 74 A61K038-47  
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TR TZ UG ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU  
 SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
 AU 2001085061 A 20020304 (200247) A61K038-47  
 CN 1392797 A 20030122 (200332) A61K038-47  
 EP 1309340 A1 20030514 (200333) EN A61K038-47  
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
 RO SE SI TR  
 JP 2004506438 W 20040304 (200417) 124 C12N009-24  
 MX 2002003894 A1 20030701 (200420) A61K038-47  
 ADT WO 2002015927 A1 WO 2001-US25882 20010817; AU 2001085061 A AU 2001-85061  
 20010817; CN 1392797 A CN 2001-802801 20010817; EP 1309340 A1 EP  
 2001-964176 20010817; WO 2001-US25882 20010817; JP 2004506438 W WO  
 2001-US25882 20010817; JP 2002-520848 20010817; MX 2002003894 A1 WO  
 2001-US25882 20010817; MX 2002-3894 20020418  
 FDT AU 2001085061 A Based on WO 2002015927; EP 1309340 A1 Based on WO  
 2002015927; JP 2004506438 W Based on WO 2002015927; MX 2002003894 A1 Based  
 on WO 2002015927  
 PRAI US 2000-641471 20000818  
 IC ICM A61K038-47; C12N009-24  
 ICS A61K038-43; A61P003-06; C07D211-46; C12N005-10; C12N009-42;  
 C12N009-99; C12N015-09; C12N015-56; C12N015-85

L16 ANSWER 5 OF 13 MEDLINE on STN DUPLICATE 4  
 AN 2002120918 MEDLINE  
 DN PubMed ID: 11714724  
 TI Structure of Penicillium citrinum alpha 1,2-mannosidase reveals the basis  
 for differences in specificity of the endoplasmic reticulum and Golgi  
 class I enzymes.  
 AU Lobsanov Yuri D; Vallee Francois; Imberty Anne; Yoshida Takashi; Yip  
 Patrick; Herscovics Annette; Howell P Lynne  
 CS Program in Structural Biology and Biochemistry, Research Institute, The  
 Hospital for Sick Children, 555 University Ave., Toronto, Ontario M5G 1X8,  
 Canada.  
 NC 31265  
 SO Journal of biological chemistry, (2002 Feb 15) 277 (7) 5620-30.  
 Electronic Publication: 2001-11-19.  
 Journal code: 2985121R. ISSN: 0021-9258.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 OS PDB-1KKT; PDB-1KRE; PDB-1KRF

EM 200203  
ED Entered STN: 20020222  
Last Updated on STN: 20030105  
Entered Medline: 20020321

L16 ANSWER 6 OF 13 MEDLINE on STN DUPLICATE 5  
AN 2000400996 MEDLINE  
DN PubMed ID: 10913312  
TI Role of calnexin, calreticulin, and endoplasmic reticulum mannosidase I in apolipoprotein(a) intracellular targeting.  
AU Wang J; White A L  
CS Center for Human Nutrition, University of Texas Southwestern Medical Center, Dallas, Texas 75235-9052, USA.  
NC HL59541 (NHLBI)  
SO Biochemistry, (2000 Aug 1) 39 (30) 8993-9000.  
Journal code: 0370623. ISSN: 0006-2960.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200008  
ED Entered STN: 20000901  
Last Updated on STN: 20000901  
Entered Medline: 20000824

L16 ANSWER 7 OF 13 MEDLINE on STN DUPLICATE 6  
AN 2000102713 MEDLINE  
DN PubMed ID: 10636901  
TI Glucosidase and mannosidase inhibitors mediate increased secretion of mutant alpha1 antitrypsin Z.  
AU Marcus N Y; Perlmutter D H  
CS Departments of Pediatrics, Cell Biology and Physiology, Washington University School of Medicine, Division of Gastroenterology and Nutrition, Children's Hospital, St. Louis, Missouri 63110, USA.  
NC DK52526 (NIDDK)  
HL37884 (NHLBI)  
T32 HD07409 (NICHHD)  
SO Journal of biological chemistry, (2000 Jan 21) 275 (3) 1987-92.  
Journal code: 2985121R. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200002  
ED Entered STN: 20000309  
Last Updated on STN: 20000309  
Entered Medline: 20000224

L16 ANSWER 8 OF 13 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.  
on STN DUPLICATE 7  
AN 1999261697 EMBASE  
TI Identification, expression, and characterization of a cDNA encoding human endoplasmic reticulum mannosidase I, the enzyme that catalyzes the first mannose trimming step in mammalian Asn-linked oligosaccharide biosynthesis.  
AU Gonzalez D.S.; Karaveg K.; Vandersall-Nairn A.S.; Lal A.; Moremen K.W.  
CS K.W. Moremen, Dept. of Biochem./Molecular Biol., Life Sciences Bldg., University of Georgia, Athens, GA 30602, United States.  
moremen@arches.uga.edu  
SO Journal of Biological Chemistry, (23 Jul 1999) Vol. 274, No. 30, pp. 21375-21386.  
Refs: 77  
ISSN: 0021-9258 CODEN: JBCHA3  
CY United States  
DT Journal; Article  
FS 029 Clinical Biochemistry  
LA English  
SL English  
ED Entered STN: 19990812  
Last Updated on STN: 19990812

L16 ANSWER 9 OF 13 MEDLINE on STN DUPLICATE 8  
 AN 1999453869 MEDLINE  
 DN PubMed ID: 10521544  
 TI Cloning and expression of a specific human alpha 1,2-mannosidase that trims Man9GlcNAc2 to Man8GlcNAc2 isomer B during N-glycan biosynthesis.  
 AU Tremblay L O; Herscovics A  
 CS McGill Cancer Centre, Montreal, Quebec, Canada.  
 SO Glycobiology, (1999 Oct) 9 (10) 1073-8.  
 Journal code: 9104124. ISSN: 0959-6658.  
 CY ENGLAND: United Kingdom  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 OS GENBANK-AF148509  
 EM 199911  
 ED Entered STN: 20000111  
 Last Updated on STN: 20000111  
 Entered Medline: 19991122

L16 ANSWER 10 OF 13 MEDLINE on STN  
 AN 1998387780 MEDLINE  
 DN PubMed ID: 9719679  
 TI Substrate specificities of recombinant murine Golgi alpha1, 2-mannosidases IA and IB and comparison with endoplasmic reticulum and Golgi processing alpha1,2-mannosidases.  
 AU Lal A; Pang P; Kalelkar S; Romero P A; Herscovics A; Moremen K W  
 CS Complex Carbohydrate Research Center and the Department of Biochemistry and Molecular Biology, University of Georgia, Athens, GA 30602, USA and the McGill Cancer Centre, McGill University, Montreal, Quebec, Canada.  
 NC GM31265 (NIGMS)  
 GM47533 (NIGMS)  
 RR05351 (NCRR)  
 SO Glycobiology, (1998 Oct) 8 (10) 981-95.  
 Journal code: 9104124. ISSN: 0959-6658.  
 CY ENGLAND: United Kingdom  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199811  
 ED Entered STN: 19990106  
 Last Updated on STN: 19990106  
 Entered Medline: 19981117

=> d 3, 10 ab

L16 ANSWER 3 OF 13 MEDLINE on STN DUPLICATE 3  
 AB Mannosidases are key enzymes in the eukaryotic N-glycosylation pathway. These enzymes fall into two broad classes (I and II) and are characteristically different in catalytic mechanism, sequence, and structure. Kifunensine is an alkaloid that is a strong inhibitor against class I alpha-mannosidases but is only a weak inhibitor against class II alpha-mannosidases. In this paper, the 1.80 A resolution crystal structure of kifunensine bound to Drosophila melanogaster Golgi alpha-mannosidase II (dGMII) is presented. Kifunensine adopts a (1,4)B boat conformation in the class II dGMII, which contrasts the (1)C(4) chair conformation seen in class I human endoplasmic reticulum alpha1,2 mannosidase (hERMI, PDB ). The observed conformations are higher in conformational energy than the global minimum (4)C(1) conformation, although the conformation in hERMI is closer to the minimum, as supported by an energy calculation. Differing conformations of 1-deoxymannojirimycin were also observed: a (4)C(1) and (1)C(4) conformation in dGMII and hERMI, respectively. Thus, these two alpha-mannosidase classes distort these inhibitors in distinct manners. This is likely indicative of the binding characteristics of the two different catalytic mechanisms of these enzymes.

L16 ANSWER 10 OF 13 MEDLINE on STN  
 AB The catalytic domains of murine Golgi alpha1,2-mannosidases IA and IB that are involved in N-glycan processing were expressed as secreted proteins in P.pastoris . Recombinant mannosidases IA and IB both required divalent

cations for activity, were inhibited by \*\*\*deoxymannojirimycin\*\*\* and \*\*\*kifunensine\*\*\*, and exhibited similar catalytic constants using Manalphanth, 2Manalphanth-O-CH<sub>3</sub> as substrate. Mannosidase IA was purified as a 50 kDa catalytically active soluble fragment and shown to be an inverting glycosidase. Recombinant mannosidases IA and IB were used to cleave Man9GlcNAc and the isomers produced were identified by high performance liquid chromatography and proton-nuclear magnetic resonance spectroscopy. Man9GlcNAc was rapidly cleaved by both enzymes to Man6GlcNAc, followed by a much slower conversion to Man5GlcNAc. The same isomers of Man7GlcNAc and Man6GlcNAc were produced by both enzymes but different isomers of Man8GlcNAc were formed. When Man8GlcNAc (Man8B isomer) was used as substrate, rapid conversion to Man5GlcNAc was observed, and the same oligosaccharide isomer intermediates were formed by both enzymes. These results combined with proton-nuclear magnetic resonance spectroscopy data demonstrate that it is the terminal alphanth, 2-mannose residue missing in the Man8B isomer that is cleaved from Man9GlcNAc at a much slower rate. When rat liver endoplasmic reticulum membrane extracts were incubated with Man9GlcNAc2, Man8GlcNAc2 was the major product and Man8B was the major isomer. In contrast, rat liver Golgi membranes rapidly cleaved Man9GlcNAc2 to Man6GlcNAc2 and more slowly to Man5GlcNAc2. In this case all three isomers of Man8GlcNAc2 were formed as intermediates, but a distinctive isomer, Man8A, was predominant. Antiserum to recombinant mannosidase IA immunoprecipitated an enzyme from Golgi extracts with the same specificity as recombinant mannosidase IA. These immunodepleted membranes were enriched in a Man9GlcNAc2 to Man8GlcNAc2-cleaving activity forming predominantly the Man8B isomer. These results suggest that mannosidases IA and IB in Golgi membranes prefer the Man8B isomer generated by a complementary mannosidase that removes a single mannose from Man9GlcNAc2.

=> d 11-13

L16 ANSWER 11 OF 13 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 93:11602 SCISEARCH  
 GA The Genuine Article (R) Number: KE603  
 TI ROLE OF TARGET-CELL GLYCOPROTEINS IN SENSITIVITY TO NATURAL-KILLER-CELL LYSIS  
 AU AHRENS P B (Reprint)  
 CS MED COLL WISCONSIN, DEPT BIOCHEM, 8701 WATERTOWN PLANK RD, MILWAUKEE, WI, 53226 (Reprint)  
 CYA USA  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (05 JAN 1993) Vol. 268, No. 1, pp. 385-391.  
 ISSN: 0021-9258.  
 DT Article; Journal  
 FS LIFE  
 LA ENGLISH  
 REC Reference Count: 38  
 \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

L16 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1993:533894 HCAPLUS  
 DN 119:133894  
 TI The use of glycoprotein inhibitors to distinguish various mannosidases  
 AU Kaushal, G. P.; Elbein, A. D.  
 CS Dep. Biochem. Mol. Biol., Univ. Arkansas Med. Sci., Little Rock, AR, 72205, USA  
 SO Trends in Glycoscience and Glycotechnology (1993), 5(23), 209-18  
 CODEN: TGGLEE; ISSN: 0915-7352  
 DT Journal; General Review  
 LA English

L16 ANSWER 13 OF 13 MEDLINE on STN DUPLICATE 9  
 AN 92235070 MEDLINE  
 DN PubMed ID: 1533222  
 TI Characterization of the endomannosidase pathway for the processing of N-linked oligosaccharides in glucosidase II-deficient and parent mouse lymphoma cells.  
 AU Moore S E; Spiro R G



CS Department of Biological Chemistry and Medicine, Harvard Medical School,  
Boston, Massachusetts.  
NC DK17477 (NIDDK)  
SO Journal of biological chemistry, (1992 Apr 25) 267 (12) 8443-51.  
Journal code: 2985121R. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199205  
ED Entered STN: 19920612  
Last Updated on STN: 19970203  
Entered Medline: 19920528

=> d 11-13 ab

L16 ANSWER 11 OF 13 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

AB Natural killer cells select targets for lysis based on target cell glycoproteins. Compared to controls, K-562 cells treated with kifunensine, an inhibitor of Golgi mannosidase I, accumulate more high mannose-type asparagine-linked oligosaccharide, Man9GlcNAc2, and bind more concanavalin A, an oligomannosyl binding lectin. In addition, natural killer cell lysis of kifunensine-treated cells increases 34% over that of controls. Increased sensitivity to lysis occurs after treatment with other N-glycan processing inhibitors that promote accumulation of high mannose-type glycosides ( \*\*\*deoxymannojirimycin\*\*\* and swainsonine). In addition, \*\*\*kifunensine\*\*\* -treated cells form more effector:target conjugates. Monoclonal antibodies to the adhesion molecule LFA-1 and its ligand ICAM-1 reduce lysis of control targets but are less effective in blocking lysis of kifunensine-treated cells. K-562 cells bind anti-ICAM-1 but not anti-LFA-1, and this binding does not change after kifunensine treatment. These data demonstrate conclusively a role for asparagine-linked oligosaccharides in the human natural killer cell:target interaction. The presence of high mannose-type glycans on K-562 cells correlates with increased binding of effectors and a greater susceptibility to lysis. These results support the idea that target cell N-glycosides influence the NK-target interaction mediated by adhesion molecules such as ICAM-1.

L16 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A review, with 75 refs. A no. of compds. have been identified over the past 10 yr that inhibit specific glycosidases involved in the processing of N-linked oligosaccharides. These compds. include specific .alpha.-glucosidase and .alpha.-mannosidase inhibitors that block removal of either glucose or mannose residues at specific steps in the processing pathway, and cause the formation of altered \*\*\*carbohydrate\*\*\* structures. Many of these inhibitors have been widely used in cell culture to assess the role of specific oligosaccharide chains in the function of a given glycoprotein. In addn., these inhibitors have been useful tools to distinguish various glycosidases, as well as for producing affinity ligands for the purifn. of specific glycosidases. In particular, there are now several potent and selective inhibitors that show such activities towards the various .alpha.-mannosidases. With these inhibitors, a clear distinction can be made between the processing .alpha.-1,2 specific mannosidases (i.e., mannosidase I), mannosidase II, that cleaves both .alpha.1,3 and .alpha.1,6 mannoses from the GlcNAcMan5(GlcNAc)2 substrate, and the broad-specificity .alpha.-mannosidases that release all of the .alpha.1,2, .alpha.1,3- and .alpha.1,6-linked mannoses from Man9-4(GlcNAc)2 structures. Thus, \*\*\*deoxymannojirimycin\*\*\* or \*\*\*kifunensine\*\*\* strongly inhibit the Golgi mannosidase I, but have no effect on the Golgi mannosidase II, aryl or lysosomal .alpha.-mannosidases, and broad-specificity mannosidases. On the other hand, swainsonine and mannostatin A strongly inhibit mannosidase II, but are inactive on mannosidase I or the ER .alpha.-mannosidase. In addn., a new inhibitor, D-mannonolactam amidrazone, is a general mannosidase inhibitor that has been synthesized chem., and this compd. would provide new insight into the design of other useful and more specific inhibitors for other .alpha.-mannosidases.

L16 ANSWER 13 OF 13 MEDLINE on STN

DUPLICATE 9

AB Studies on N-linked oligosaccharide processing in the mouse lymphoma glucosidase II-deficient mutant cell line (PHAR2.7) as well as the parent BW5147 cells indicated that the former maintain their capacity to synthesize complex \*\*\*carbohydrate\*\*\* units through the use of the deglucosylation mechanism provided by endomannosidase. The in vivo activity of this enzyme was evident in the mutant cells from their production of substantial amounts of glucosylated mannose saccharides, predominantly Glc2Man; moreover, in the presence of 1-\*\*\*deoxymannojirimycin\*\*\* or \*\*\*kifunensine\*\*\* to prevent processing by mannosidase I, N-linked Man8GlcNAc2 was observed entirely in the form of the characteristic isomer in which the terminal mannose of the alpha 1,3-linked branch is missing (isomer A). In contrast, parent lymphoma cells, as well as HepG2 cells in the presence of 1-deoxymannojirimycin accumulated Man9GlcNAc2 as the primary deglucosylated N-linked oligosaccharide and contained only about 16% of their Man8GlcNAc2 as isomer A. In the presence of the glucosidase inhibitor castanospermine the mutant released Glc3Man instead of Glc2Man, and the parent cells converted their deglucosylation machinery to the endomannosidase route. Despite the mutant's capacity to accommodate a large traffic through this pathway no increase in the in vitro determined endomannosidase activity was evident. The exclusive utilization of endomannosidase by the mutant for the deglucosylation of its predominant N-linked Glc2Man9GlcNAc2 permitted an exploration of the in vivo site of this enzyme's action. Pulse-chase studies utilizing sucrose-D2O density gradient centrifugation indicated that the Glc2Man9GlcNAc2 to Man8GlcNAc2 conversion is a relatively late event that is temporally separated from the endoplasmic reticulum-situated processing of Glc3Man9GlcNAc2 to Glc2Man9GlcNAc2 and in contrast to the latter takes place in the Golgi compartment.

=> dis his

(FILE 'HOME' ENTERED AT 20:13:39 ON 14 APR 2005)

FILE 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS, ESBIODBASE, BIOTECHNO, WPIDS' ENTERED AT 20:13:49 ON 14 APR 2005

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L1      4 S GLUCOCEREBROSIDASE (10A) KIFUNENSINE
L2      3 DUP REM L1 (1 DUPLICATE REMOVED)
L3      7 S GLUCOCEREBROSIDASE AND KIFUNENSINE
L4      4 DUP REM L3 (3 DUPLICATES REMOVED)
L5      2 S L4 NOT L2
L6     320 S GLUCOCEREBROSIDASE AND MANNOSE
L7     161 S GLUCOCEREBROSIDASE (5A) MANNOSE
L8      3 S GLUCOCEREBROSIDASE (5A) MANNOSE (5A)MANNOSIDASE
L9      2 DUP REM L8 (1 DUPLICATE REMOVED)
L10     111 S KIFUNENSINE (5A) DEOXYMANNOJIRIMYCIN
L11      4 S L10 AND GLUCOCEREBROSIDASE
L12      3 DUP REM L11 (1 DUPLICATE REMOVED)
L13     111 S L10 AND MANNOS?
L14      0 S L10 AND CARBOHYDRATE CORE
L15     43 S L10 AND CARBOHYDRATE
L16     13 DUP REM L15 (30 DUPLICATES REMOVED)

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=> log h

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	111.80	112.01
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.73	-0.73

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